



ALABAMA 911 BOARD

**Next Generation 911 and the NPSBN
2016 Southeastern U.S. Public Safety Broadband Summit
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What is NG9-1-1?

NG9-1-1 is an Internet Protocol (IP)-based system comprised of managed Emergency Services IP networks (ESInets), functional elements (applications), and databases that replicate traditional E9-1-1 features and functions and provides additional capabilities. NG9-1-1 is designed to provide access to emergency services from all connected communications sources, and provide multimedia data capabilities for Public Safety Answering Points (PSAPs) and other emergency service organizations. (Source: NENA)

Next Generation 9-1-1 or NexGen9-1-1 or NG9-1-1 is a public safety grade IP-based digital 9-1-1 network that contains the core functionality of location-based call routing that is:

- ✓ Secure
- ✓ Reliable
- ✓ Redundant
- ✓ Flexible
- ✓ Open point of entry
- ✓ Scalable
- ✓ Standards-based



NG9-1-1 Efforts in Alabama:

What is ANGEN and why is it important?

- In the late 2000s/early 2010s, the predecessor to our current board, the Alabama Wireless Board, partnered with Alabama EMA with support of the local ECDs to receive and match federal grant funds to engage the services of a vendor to embark on ANGEN in its original design and intent.
- **Alabama Next Generation Emergency Network** - A project planned to install an Internet Protocol (IP) network to allow handling 9-1-1 calls via IP.
- 9-1-1 is transitioning from legacy to next generation technology.
 - The needs of the citizenry, 9-1-1 centers, and responders have changed.
 - Carriers are planning to retire their legacy assets.
 - Alabama decided to take a proactive role in this migration.



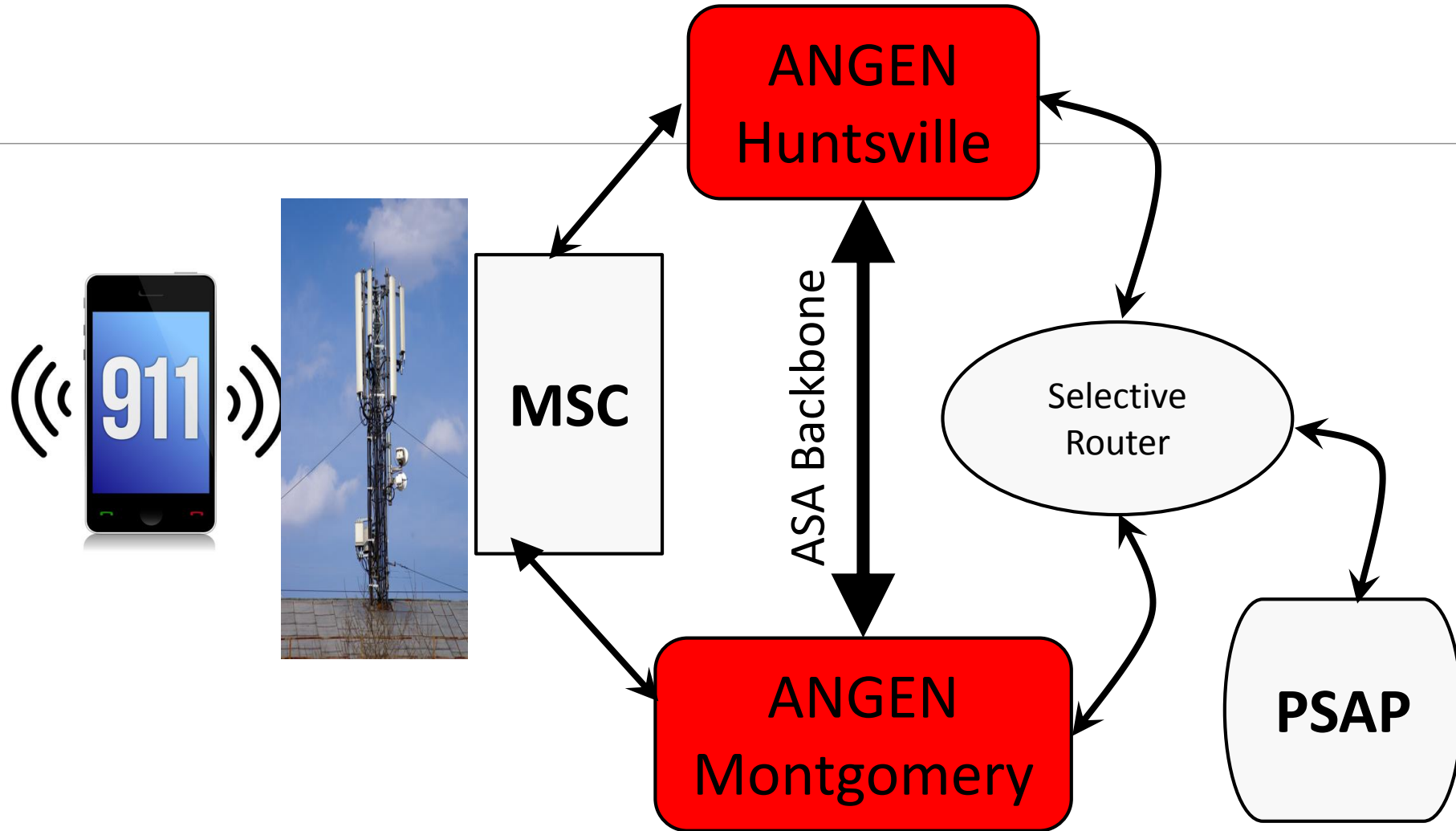
Schedule (Planned vs. Actual)

- October 2013
 - Convert 1 PSAP in 5 remaining tandems
- November-December 2013
 - Basic Testing with Carriers
 - Carriers convert PSAPs
 - Lab to Lab testing with IP capable CPE vendors
 - “Freeze” sometime in December so PSAP conversions will stop
- January - April 2014
 - Continue Converting PSAPs
 - Begin Testing IP PSAPs
 - April - First IP PSAPs Go-Live
- April 2014 until finished
 - Convert PSAPs to ANGEN
 - Install IP Circuits to IP capable PSAPs
 - Install IP Circuits to Legacy PSAPs
 - Some Carriers say 20 PSAPs per month; some Carriers may be much quicker
 - Convert all PSAPs in a given Tandem so Carrier may disconnect their legacy circuits
- Cannot Send Wired Traffic back to existing Selective Routers.
 - Must convert a PSAP to IP before they can get wired traffic from ANGEN
 - Convert select PSAPs to IP
 - All Carriers operating in those counties could convert to ANGEN

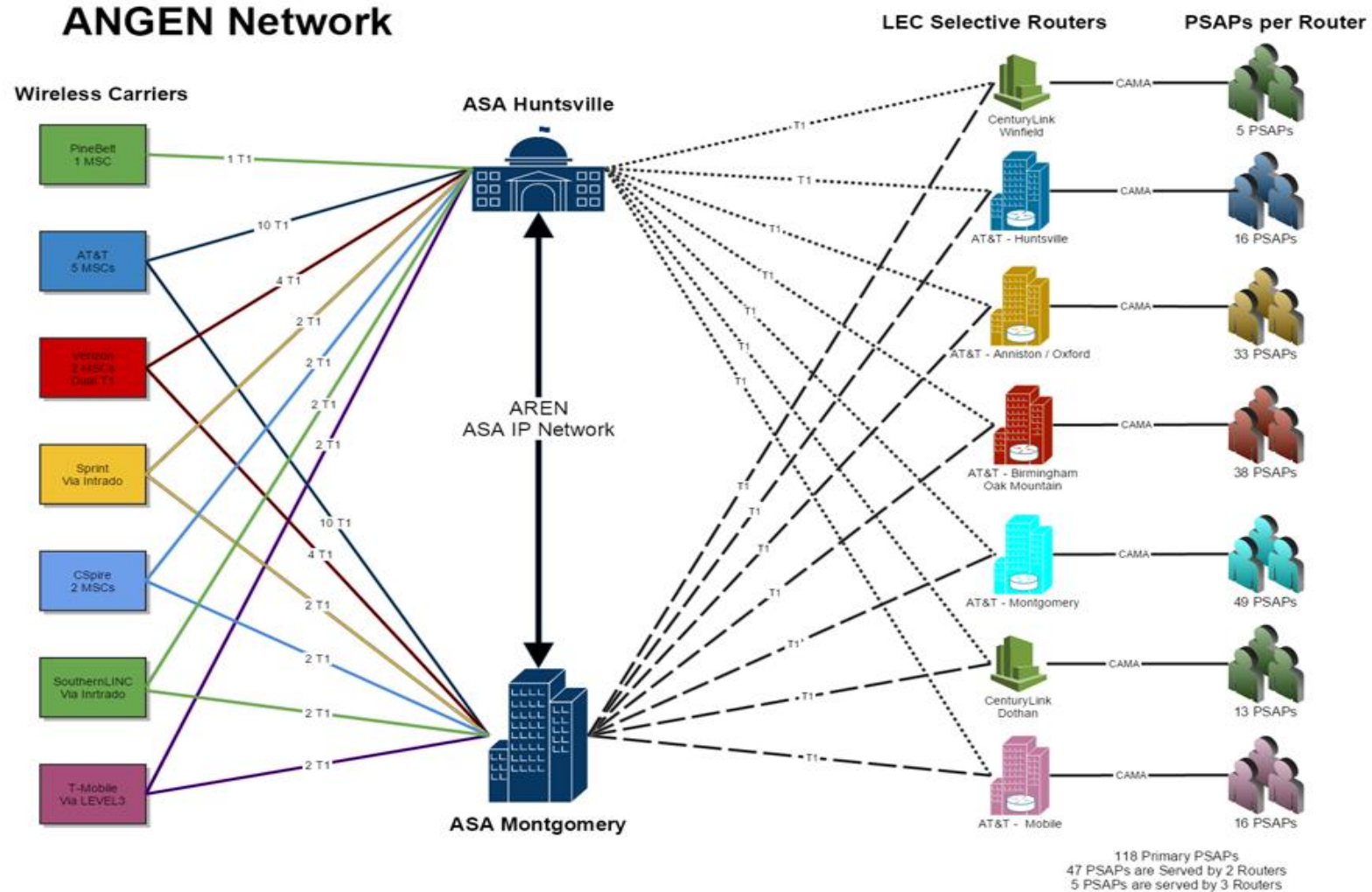
- Late 2012 – 2013
 - Transition of project from Wireless Board to Statewide Board
- 2013
 - Conversion of wireless carriers to ANGEN began
- 2014
 - Conversion of wireless carriers to ANGEN continued until all wireless carrier were converted to ANGEN in December
- 2015
 - The Board and its current ANGEN vendor cannot develop the project any further under the conditions of the current contract
 - Currently in development phase of an RFP for a statewide IP system
 - Explore additional NG9-1-1 designs, solutions, and services that best fit Alabama’s needs to transition ANGEN to be able to accommodate wireless as well as wireline 9-1-1 calls
 - Add value to and support local, regional, state, and federal initiatives
 - Educate, inform, and communicate with the 9-1-1 community and its stakeholders
- 2016 until finished
 - Migrate to an all IP-based network



ANGEN Phase 1 - Planned



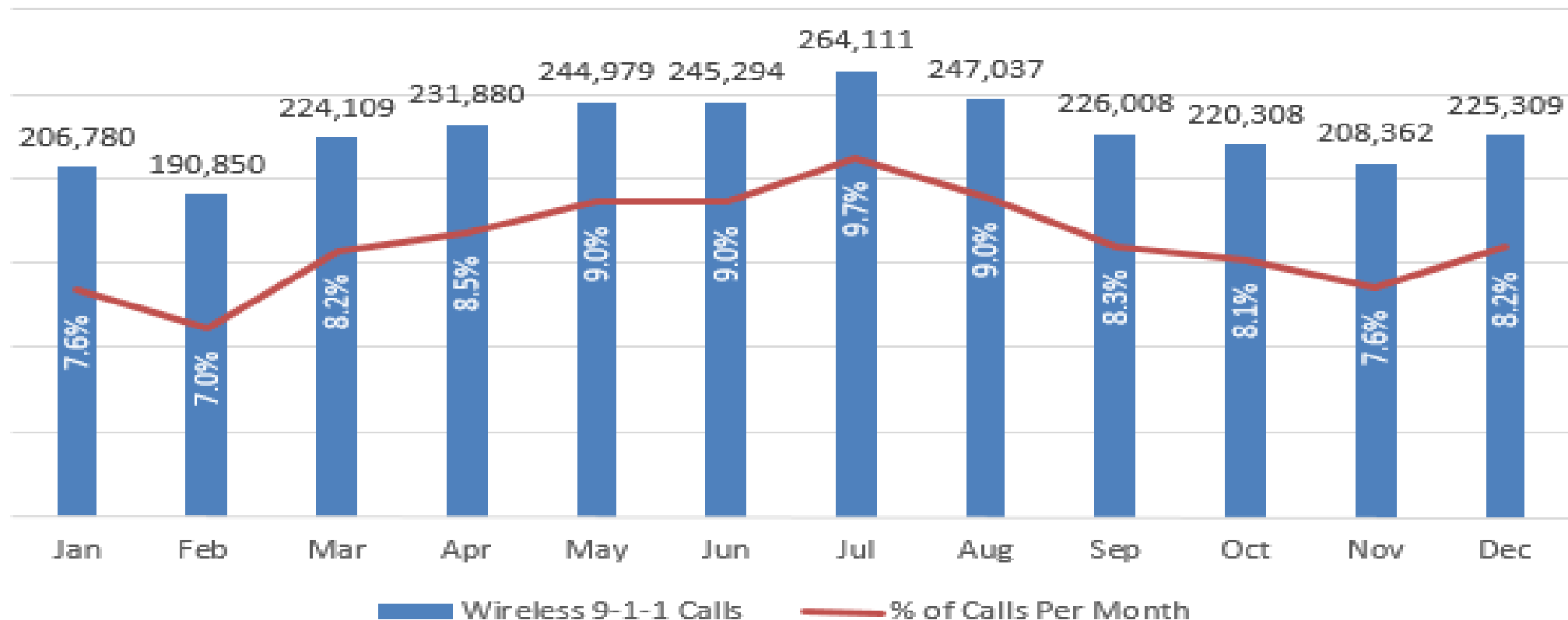
ANGEN - Actual



ANGEN – Present

*2,735,027 wireless 9-1-1 calls processed by ANGEN in 2015

ANGEN - Wireless 9-1-1 Calls by Month
2015



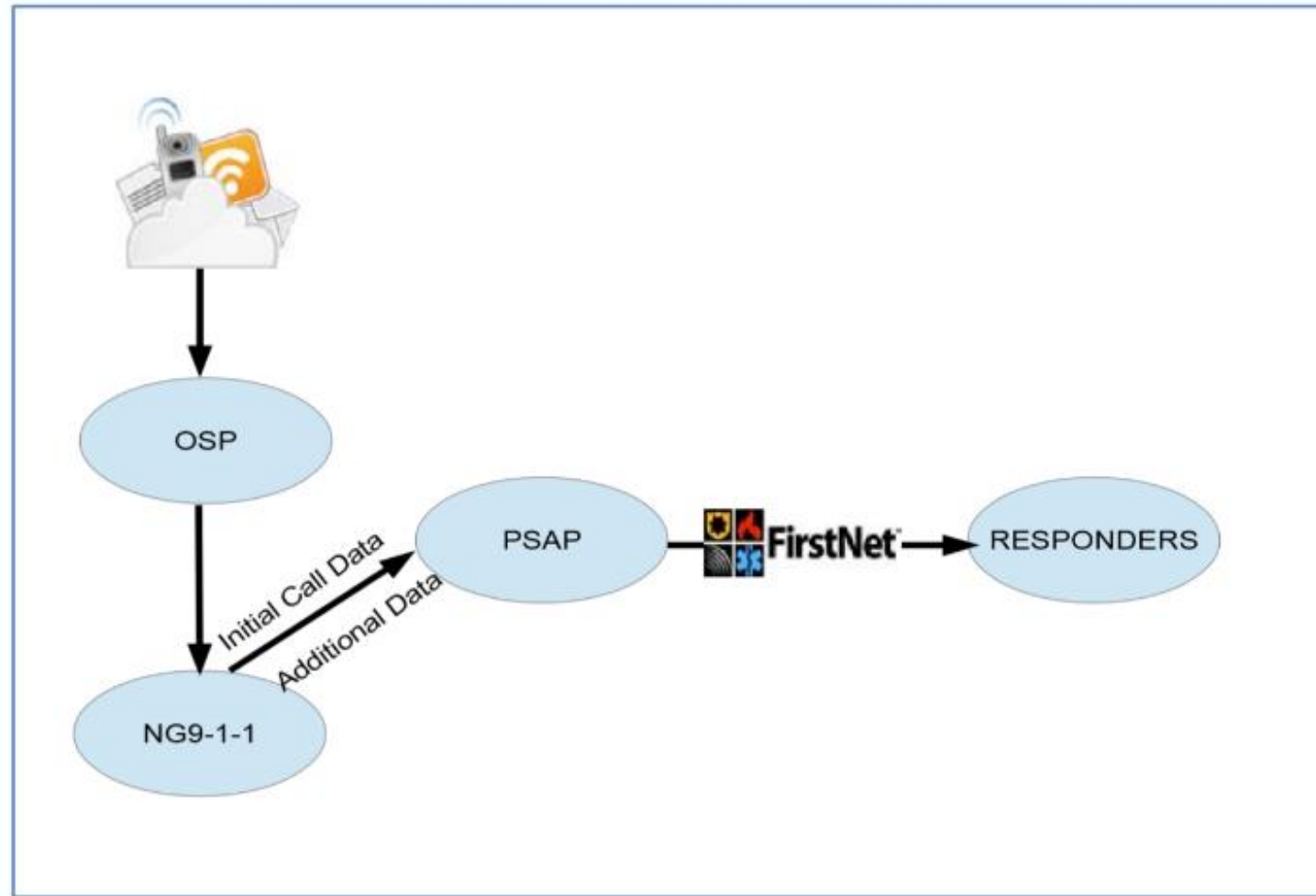
ANGEN - Future

- The draft RFP will go before the Board next week for a vote to be released or not.
- If released, the Board will:
 - Accept proposals
 - Evaluate submissions
 - Potentially, award a contract
- If a contract is successfully negotiated, the project will then focus only on the services required for the operation of the ANGEN network and the services it provides to Alabama PSAPs.



Where does NG9-1-1 fit in?

Source: National Public Safety Telecommunications Council, FirstNet and Next Generation 9-1-1, High-Level Overview of Systems and Functionality, Final Report



Considerations

NG9-1-1 and FirstNet relationships are tied together as two networks, but a single system.

- End-to-end solution for citizens and public safety

As complex as it may seem, the technology is the easy part – the policy, organization, and politics are the biggest challenges.

- Governance
- Regulatory
- Inter-/intra- government agreements
- Privacy concerns
- Private sector interests

Partnerships and collaboration are key.





QUESTIONS?

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